# Navajo Abandoned Uranium Mine

# Site Screen Report

*This form is for use at the site of abandoned uranium mines (AUM) located on Navajo Nation lands. Applicable sites include all mine and mine features that have or have not undergone reclamation by the Navajo Abandoned Mine Lands Reclamation Program, including features, adits, pits and waste piles. Applicable sites also include all AUM sites listed in the USEPA CERCLIS database, all sites listed in the 2008 AUM GIS Report issued by USACOE and USEPA, all AUM sites on allotment lands associated with the Navajo Nation, and any and all AUM sites not listed in any database located on Navajo lands. Reconnaissance of any sites located on lands adjacent to Navajo lands that may be impacting Navajo lands will need to be coordinated with the authorities appropriate to those lands.*

*The purpose of the form is to ascertain the status and location of the identified AUM site, and record all immediate site information associated with the mine site. Decisions and recommendations on what additional steps are needed will be provided on a separate document.*

# Phillip Dee 1 AUM Site

**Navajo AUM Northern Region**

**Prepared by:**

**Weston Solutions, Inc.**

**Contract: W91238-06-F-0083**

**12767.063.496.1111**

**August 2010**

**Part I Site Identification, Location and Status**

**Site Names and ID numbers as applicable**

**Mine ID:** 449

**Map ID:** N8

**CERCLIS:** NNN000909019

**Navajo Abandoned Mine Land Reclamation Program:** None

**Local name / Aliases:** Phillip Dee #1

**Chapter and local area:** Red Mesa Chapter

**County:** Apache **State:** Arizona

**Lat/Long:** 36.862991748 N / -109.459621557 W

**Nearby road and highway:** Highway 160 **Local Post Office:** Red Mesa

**Surface Land Status: check one or more and provide ownership and contact information below**

| | | | |
|---|---|---|---|
| **Tribal Trust Land** | ☒ | **Public lands** | ☐ |
| **Private** | ☐ | **Tribal Fee Land** | ☐ |
| **Bureau of Land Mgmt** | ☐ | **Allotment** | ☐ |
| **State** | ☐ | **Fee land** | ☐ |

**Subsurface Mineral Rights:**

No information on subsurface mineral rights ownership was found in the EPA/AUM Database.

**Claim and operator information:**

The mine site surface land status is classified as Tribal Trust Land. Historical documents showed the operator of the mine as Granger Uranium from 1954 to 1955. No other historical ownership / lease information was identified in the EPA/AUM database.

**Number of residential structures within 200 feet of mine:** None

**Estimated volume of mine waste onsite:** None

## Part II Summary of radiological readings

### Highest gamma radiation measurement:

59,856 counts per minute (cpm)

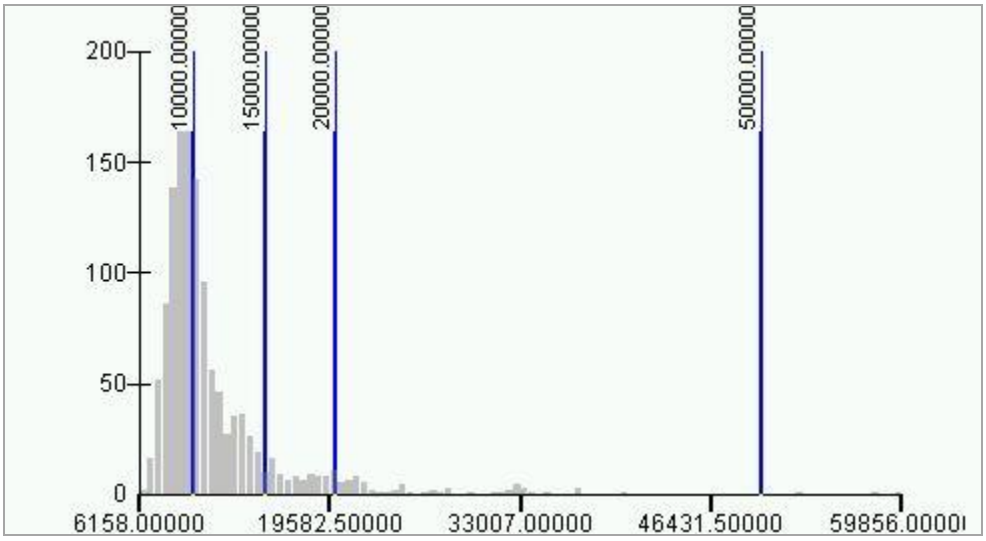
### Describe any other radiological measurements:

A total of 1,279 gamma radiation measurements were collected from the mine site, ranging from 6,158 cpm to 59,856 cpm. Measurements collected in the vicinity of the waste debris were found at levels up to approximately 60,000 cpm. The measurements are represented in Figures 1 and 2.

**Background Locations** **Average background =** 9,186 cpm
#1 9,186 cpm

### Distribution Chart and Statistics:

The following chart and statistics were generated by ESRI ArcGIS 9.3.1, and show the general distribution of the site gamma radiation measurements. The horizontal X axis represents the gamma radiation reading levels in cpm (lowest levels to the left). The vertical Y axis represents the frequency of each gamma radiation level.




| | |
|---|---|
| Count: | 1279 |
| Minimum: | 6158.00000 |
| Maximum: | 59856.00000 |
| Sum: | 14522741.00000 |
| Mean: | 11354.76231 |
| Median: | 9909.00000 |
| Standard Deviation: | 4850.05918 |

## Part III Status of Reclamation and Mine Waste

**The following information was obtained from the Navajo Abandoned Mine Land Reclamation Program (NAMLRP) Point Features Database:**

**NAMLRP Status of the mine site: Reclaimed :** No **Waste Pile onsite :** Yes

**NAMLRP Project Number:** None

**NAMLRP Mine features:** 1 Rim Strip / Pit

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**The following information was obtained from field observations collected during the 2010 site screening:**

**Provide description and status of all mine sites and features at site. Include all waste piles, adits, pits and other features, and indicate whether they are open, closed, covered, capped, buried or unreclaimed. Indicate approximate size, shape and extent, including description of any reclamation caps. Note condition of all caps.**

**Observed reclamation work and status:**

**Adits**
None

**Waste Piles**
None

**Pits**
None

**Shafts**
None

**Other Debris and Mine Features**
None

**Part IV**

**Site observations and Environs**

**Observed Structures: list number of and describe human habitation status of structures at the following distances from mine:**

**0 to 200 feet:** None

**200 feet to 0.25 mile:** None

**Observed Public or commercial structure: list and describe all schools, clinics, Chapter Houses, places of business and any other structure used by members of the community at the following distances:**

**0 to 200 feet:** None

**200 feet to 0.25 mile:** None

**Levels measured around the perimeter(s) of the identified structure(s):**

None

**Observed water sources: list the number and type of wells and surface water sources that are potentially used for human consumption at the following distances from the mine:**

**0 to 0.25 miles:** None

**0.25 miles to 4 miles:** None

**Sensitive environments: note and describe all sensitive environments located within visible range of the mine site, including: wetlands, endangered species, habitats and approximate locations of sites that may be under protection of the government of the Navajo Nation.**

None

**Known Site History: include information from interviews with Chapter officials and residents. Note information on mine ownership, type of mining operation, period of operation, known amount of production, and any other information as provided.**

Phillip Dee 1 mine consists of an area 24,828.28 $m^2$. The mine was identified as being operational from 1954 to 1955. Historical documents showed the operator of the mine as Granger Uranium from 1954 to 1955. While operational, the mine had a total reported production volume of 164 tons. No other historical information or any additional ownership / lease information was identified in the EPA/AUM database.

## Part V Response Action Summary

**Site Name(s):** Phillip Dee 1 **Chapter:** Red Mesa

### Decision Criteria

**Is there an unreclaimed waste pile at the site?** No

**At what distance from the waste pile is the nearest residential structure located?** None

**At what distances from the waste pile are there potential drinking water sources?** None

**Is there a reclamation cap or sealed adit in place at the site?** No

**Is the cap/seal functionally intact?** No

**Is the cap/seal sufficiently degraded to create a concern about releases?** No

**At what distance from the cap/seal is the nearest domestic structure located?** None

**At what distance from the cap/seal is the nearest domestic drinking water source?** None

### Summary of emergency response factors

None

### Summary hazard ranking system factors

None

### Summary of reclamation factors

None

## Part VI Photos

Photo 1. Phillip Dee 1 site

Photo 2. Phillip Dee 1 site

Photo 3. Phillip Dee 1 site

## Part VII Contacts Reports and Information

Name: Stanley Edison (928) 871-6861

Eugene Esplain (928) 871-7331

Title or official role (if any) Navajo EPA Superfund Program

Address PO Box 2946, Window Rock, AZ 86515

Information provided Lead Regulatory Agency

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Name_____

Title or official role (if any) _____

Telephone number_____

Information provided_____

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Name_____

Title or official role (if any) _____

Telephone number_____

Information provided_____

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Name_____

Title or official role (if any) _____

Telephone number_____

Information provided_____

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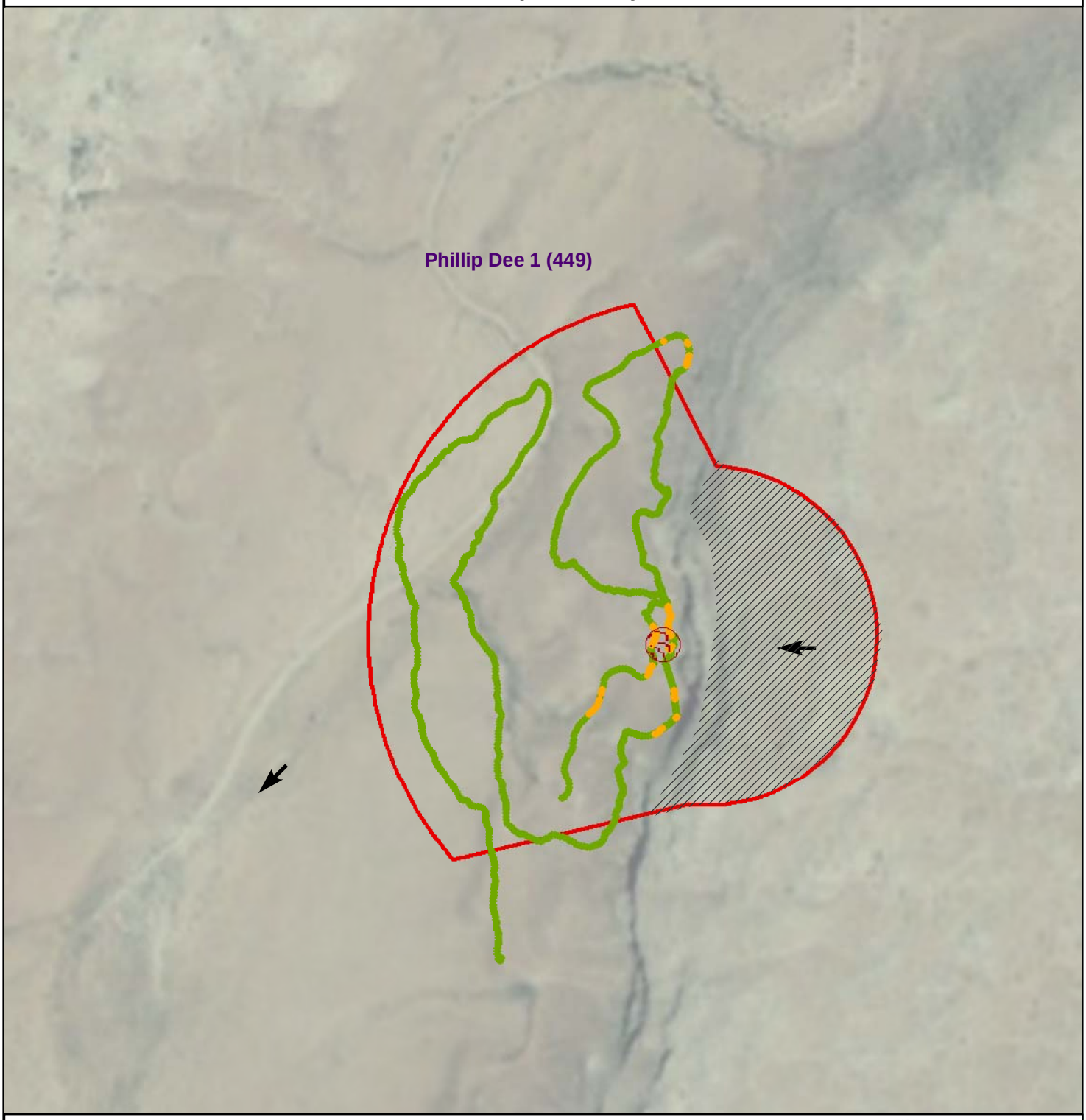
# Figure 1 - Gamma Radiation Measurements, Above Two Times Background
## Phillip Dee 1 (449)
## Red Mesa Chapter, Navajo Nation




**Legend**

**Gamma Radiation Measurements**

- < 2X Backgound
- > 2X Background

**Gamma survey conducted 06/2010**
**Measured as counts per minute (cpm)**

**Average background = 9,186 cpm**

- **General Direction Down-Slope**
- **Mine Claim Boundaries**
- **Inaccessible due to steep grades**
- **Observed Waste Pile**

N

**Feet**

**0** **200**

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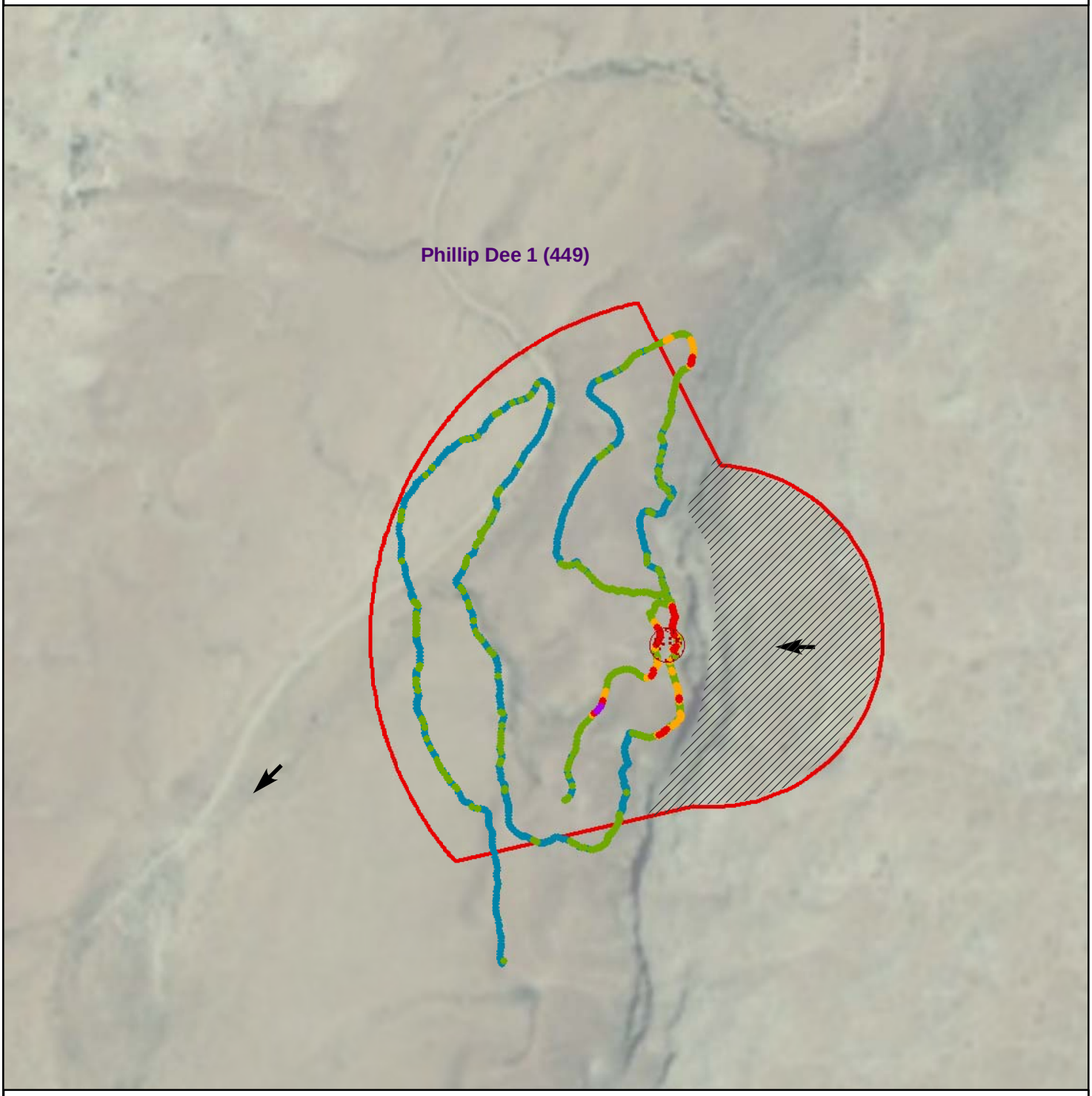
# Figure 2 - Gamma Radiation Measurements
# Phillip Dee 1 (449)
# Red Mesa Chapter, Navajo Nation




## Legend

**Gamma Radiation Measurements**

- 0 - 10,000
- 10,000 - 15,000
- 15,000 - 20,000
- 20,000 - 50,000
- 50,000 - 100,000
- > 100,000

**General Direction Down-Slope**

**Mine Claim Boundaries**

**Inaccessible due to steep grades**

**Observed Waste Pile**

**Gamma survey conducted 06/2010**
**Measured as counts per minute (cpm)**

**Average background 9,186 cpm**

N

Feet

0 200

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